

- Scientific American.* New York. v. 82. April, 1926.  
 Hausman, Leon Augustus. The mythological rain-tree. p. 251.
- Scientific monthly.* New York. v. 22. April, 1926.  
 White, David. Some cold waves of geologic history. p. 359-363.
- Terrestrial magnetism & atmospheric electricity.* Baltimore. v. 30. December, 1925.  
 Bauer, Louis A., & Duvall, C. R. Studies concerning the relation between the activity of the sun and of the earth's magnetism. p. 191-213.
- Washington academy of sciences. Journal.* Baltimore, Md. v. 16. March 19, 1926.  
 Dellinger, J. H. Application of radio transmission phenomena to the problems of atmospheric electricity. p. 162-167.

- Weltall.* Berlin. 25. Jahrgang. Januar 1926.  
 Martell, P. Das Klima von Berlin. p. 49-57.  
 Wiedemann, Eilhard. Ueber alte Beobachtungen des Zodiakallichts und der Dämmerung. p. 58-59.  
 Wetter. Berlin. 42. Jahrgang. November 1925.  
 Aufsesz, Otto Frhr. v. u. z. Zusammenhang zwischen Luftdruckverteilung und Sonnenrotation. p. 263-270.  
 Defant, A. Witterungsperioden. p. 257-263.  
 Meissner, Otto. Weitere Bemerkung über die Zuverlässigkeit langfristiger Wettervoraussagen. p. 272-273.

## SOLAR OBSERVATIONS

### SOLAR AND SKY RADIATION MEASUREMENTS DURING MARCH, 1926

By HERBERT H. KIMBALL, Solar Radiation Investigations

For a description of instruments and exposures and an account of the method of obtaining and reducing the measurements, the reader is referred to the REVIEW for January, 1924, 52: 42, January, 1925, 53: 29, and July, 1925, 53: 318.

From Table 1 it is seen that solar radiation intensities averaged above March normals at all three stations. At Washington, a noon reading of 1.53 gr. cal./min./cm.<sup>2</sup> on the 5th, is 3½ per cent higher than any intensity heretofore measured at that station in March, and 1½ per cent higher than the maximum that has been measured in any month.

Table 2 shows that the total solar and sky radiation received on a horizontal surface averaged above the March normal at all three stations, and decidedly above at Washington and Madison.

Skylight polarization measurements were not made at Madison on account of the presence of snow on the ground during nearly the entire month. At Washington, measurements made on six days give a mean of 61 per cent with a maximum of 66 per cent on the 5th. These are above the average March values for Washington.

TABLE 1.—Solar radiation intensities during March, 1926

[Gram-calories per minute per square centimeter of normal surface]

#### Washington, D. C.

Date	Sun's zenith distance										
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	Noon
	78th mer. time	Air mass									Local mean solar time
		e.	5.0	4.0	3.0	2.0	1.0	2.0	3.0	4.0	
Mar. 2	mm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm.
3	1.02	1.02	1.14			1.42	1.61				1.19
4	1.45				1.23	1.39	1.55	1.40			1.52
8	1.19				0.90						1.68
9	2.26			1.10	1.24	1.40	1.58	1.42	1.20		1.37
13	0.96					1.43	1.59	1.42	1.24		3.15
16	2.74								1.38		1.15
23	4.17			1.06	1.18	1.32	1.44				3.78
29	2.74						1.55	1.34			4.95
Means	(1.02)	1.10	1.14	1.39	1.53	1.38	(1.22)				2.74
Departures	+0.05	+0.06	-0.04	+0.07			+0.08	+0.05			

TABLE 1.—Solar radiation intensities during March, 1926—Contd.  
 Madison, Wis.

Date	Sun's zenith distance										
	78th mer. time	Air mass									Local mean solar time
		A. M.				P. M.					
		e.	5.0	4.0	3.0	2.0	1.0	2.0	3.0	4.0	5.0
Mar. 2	mm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm.
3	1.02	1.02	1.14			1.42	1.61				1.19
4	1.45				1.23	1.39	1.55	1.40			1.52
8	1.19				0.90						1.68
9	2.26			1.10	1.24	1.40	1.58	1.42	1.20		1.37
13	0.96					1.43	1.59	1.42	1.24		3.15
16	2.74							1.38	1.13		1.15
23	4.17			1.06	1.18	1.32	1.44				3.78
29	2.74						1.55	1.34			4.95
Means	(1.02)	1.10	1.14	1.39	1.53	1.38	(1.22)				2.74
Departures	+0.05	+0.06	-0.04	+0.07			+0.08	+0.05			

#### Lincoln, Neb.

Mar. 1	3.00	1.06	1.14	1.26		1.42	1.34				2.16
2	2.16	1.02	1.13	1.32	1.47	1.64	1.43	1.27	1.12	0.99	1.68
3	1.98	0.81	0.90	1.07	1.24	1.35	1.35	1.10	1.01	0.92	2.62
4	2.62				0.78	0.98					3.00
8	1.98		1.10	1.19	1.30						2.74
11	3.30		0.78	1.02	1.22	1.46					5.36
13	1.78			1.08							1.98
15	2.74			1.17	1.28		1.41	1.19	1.10	0.99	3.00
16	3.30	0.95	1.10	1.24	1.39	1.57	1.38	1.21	1.07	0.96	4.95
17	3.45	0.85	0.92	1.08	1.28	1.52					7.57
20	3.81		0.82	1.23			1.29	1.06	0.88		3.81
22	5.36					1.58	1.33	1.18	0.99		3.63
23	4.17	0.79		1.01	1.17						4.17
26	1.88					1.58	1.37	1.22	1.08	0.97	1.78
31	1.88					1.49	1.27	1.07	0.93	0.84	1.88
Means		0.91	1.01	1.12	1.25	1.51	1.36	1.16	1.02	0.94	
Departures		+0.02	+0.06	+0.03	-0.04		+0.07	+0.07	+0.08	+0.12	

TABLE 2.—Solar and sky radiation received on a horizontal surface  
 [Gram-calories per square centimeter of horizontal surface]

Week beginning	Average daily radiation					Average daily departure from normal		
	Washington	Madison	Lincoln	Chicago	New York			
Feb. 26	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.
Mar. 5	348	350	418	112	214	+60	+86	+80
12	350	288	301	115	207	+44	+2	-59
19	382	375	382	134	248	+49	+72	-3
26	351	329	421	88	269	+16	-59	+15
Deficiency since first of year on Apr. 1						-12	-8	-7
						-91	-1,561	-2,000

<sup>1</sup> Extrapolated.